

Construction Safety: **Best Practices** in Training Hispanic Workers

Hispanics now comprise more than 20 percent of construction employees. “The Hispanic proportion of the construction industry work force has grown rapidly and we expect this will continue,” says Justin Crandol, director of safety and health services at the national office of Associated General Contractors. “This raises some of the most important safety issues facing AGC and the construction industry.”

Those issues focus on finding ways to address the language and cultural differences in the Hispanic population so that construction employers can keep Hispanic workers safe. From 1997 to 2002, total fatalities in the construction industry rose by slightly more than one percent (see Chart 1), according to the Bureau of Labor Statistics. During this same period, the number of Hispanic fatalities in the industry shot up by almost 50 percent.

One bright light in this bleak picture is a unique, 40-hour training course being used in the \$2.6 billion Dallas/Forth Worth Airport (DFWA)

expansion project. The airport’s safety training program (STP) appears to be breaking down barriers of language, literacy and culture – and having a big impact on safety.

Such success couldn’t come at a better time for Texas Hispanic construction workers. In 2000, 277 Hispanic workers lost their lives in construction-related incidents; 81 of these fatalities occurred in Texas, while 36 took place in California and 20 in Florida.

Such statistics prompted the Hispanic Contractors Association de Tejas (HCAT), an association formed in 1997 that now has six chapters in the state, to recently declare a “state of emergency” for Hispanic construction workers in Texas.

The problem is even more acute in the Dallas-Ft. Worth area. Since 2000, Dallas-Ft. Worth

A safety training program at the Dallas/Ft. Worth airport offers hope in the effort to stem a surge in fatalities among Hispanic construction workers.

by James L. Nash

Then and now: the changing complexion of fatalities in construction

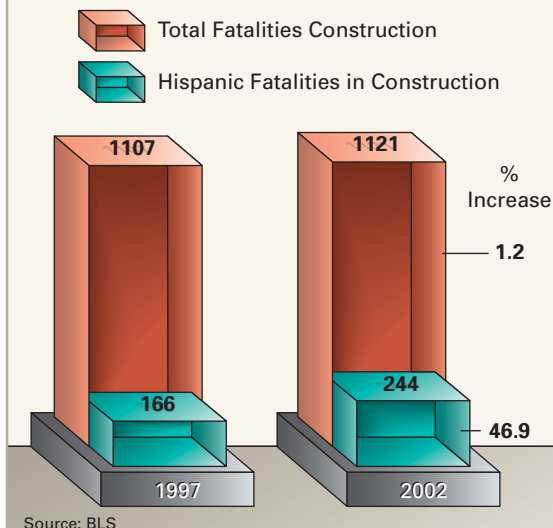


Chart 1. The number of fatalities for all construction workers has increased 1.2 percent since 1997, but the number of fatalities among Hispanic workers has increased 46.9 percent.

has had more fatalities in construction than any other metropolitan area in the nation, according to Javier Arias, chairman of HCAT. Arias said HCAT has just declared a special state of emergency for the Dallas-Ft. Worth area.

Arias is clear about what he sees as the solution to this problem. "It's about training, communication and culture," he says. "Our main task is to train and provide information to the workers in the proper language *before* they need it.

An Admirable Safety Record

If Texas is facing tough challenges in the safety of its Hispanic workers, DFWA's Capital Development Program (CDP), as the airport expansion is called, may have one of the best construction training programs in the country. The program, which began in September 2002 and will entail 23 million man-hours of construction, has an admirable safety record (see Chart 2). In addition to an injury rate far below the national average for a heavy construction site, DFWA is saving additional money on its project-controlled insurance program (PCIP). The average cost of a workers' compensation claim is more than 15 percent lower than the

Texas average (see Chart 3).

"It's a good program out there [at DFWA]" comments Dean Wingo, OSHA's area director for the Ft. Worth

Safety Pays

\$11,058 Average cost of Texas workers' compensation claim

\$9,272 Average cost of DFWA workers' compensation claim

Source: DFWA

office. "What's unusual is the education they require everyone to have. Even on larger jobs, I don't see that."

Wingo adds that an OSHA inspection of the site 1 year ago turned up just 16 companies with violations of agency safety rules, out of 180 contractors on site at the time. "That's pretty low. Usually, we find about 50 percent of contractors or subcontractors have a violation." Most of the violations had to do with unsafe acts, rather than unsafe conditions: employees who had unhooked fall protection equipment, or were under a suspended load.

"Even with excellent training, you

DFW's Impressive Safety Record

Incidence rates of injuries and illnesses per 100 full-time workers

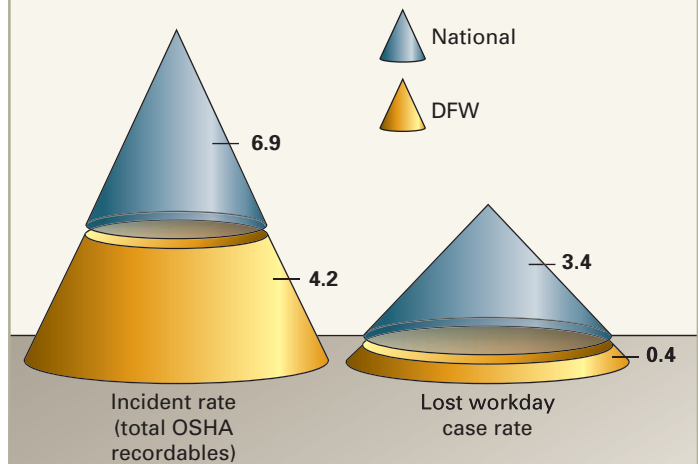


Chart 2. As of December 2003, Dallas/Fort Worth Airport's (DFWA) three-year expansion project had no fatalities and lower injury and illness rates than the national average for heavy construction projects.

still have to deal with the human factor," explains Wingo.

The safety training program is not the only reason DFWA has compiled a good safety record. One of the biggest challenges in construction safety is inducing smaller subcontractors to take safety as seriously as larger companies. But by utilizing a "wrap-up" insurance program, the airport project enforces a single, universal safety program for all subcontractors at the worksite, according to Keith Smith, EHS manager for Dallas-based Austin Commercial, one of the general contractors for the project.

Wingo credits the universal safety and incentive programs as important contributing factors to DFWA's low injury rates.

But what is most unique about DFWA's safety program is its mandatory 40-hour bilingual safety training program. What lessons does it teach those who want to improve the safety of non-English speaking construction workers?

Bilingual Construction Training: Best Practices

The safety training program was developed by BEST Institute Inc. of Gar-

land, Texas, in conjunction with the two primary contractors at the airport project. So far, nearly 13,000 students have taken the course; roughly half took it in Spanish. Those involved with the program cite these elements as integral to its success:

Speak the workers' language. According to OSHA's interpretation of 1910.1200(h), when employers have a training requirement, they must provide it in a language the worker can understand. Teaching in the appropriate language, however, is only the beginning. Successful training of Latino workers must be sensitive to differences in culture and education that distinguish Latinos from other workers – and that even divide Latinos among themselves. Really reaching workers, affecting their behavior and attitudes, entails more than language fluency.

"We recruit instructors who are from the ethnic groups we are training," explains Joseph Halcarz, BEST's president. Both instructors and curriculum developers are bilingual, and Halcarz says he tries to use instructors who have worked in construction.

Part of the training involves helping English-speaking and Spanish-speaking workers to understand basic construction terms, according to Javier Maldonado, a manager of field engineers who took the 40-hour course. "The course doesn't try to make you fluent in the other language, but it does teach you to say 'peligro' [danger] or 'cuidado' [careful], if you see someone with his back to dangerous equipment," says Maldonado. "Knowing a few key words could save someone's life."

The classroom instruction is backed up with printed material workers can take on the job. OSHA's Wingo singles out this part of the STP for special praise. "I think it's pretty innovative that they give workers these cards with Spanish to English on one side, and English to Spanish on the other."

Address cultural differences. Here's how Arias explains one key cultural difference between Hispanic and English-speaking workers that can have huge safety implications. "Maybe it's machismo, maybe it's because our fathers told us if you want to help some-

one you don't say no, or maybe it's fear we'll lose our job, but often we don't want to say, 'No.'"

Wingo contends Hispanic workers are often very loyal and dedicated, and explains the difference between them and Americans somewhat differently. "If a hammer falls apart, you'll find the Latino has found a way to tape it back together, whereas an American worker will come to you and say, 'You gave me this piece of crap and I can't do my job!'"

Whatever the reason, the reluctance of many Latinos to challenge authority means they may agree to do unsafe jobs, or not stop co-workers from risky behavior. This cultural aversion to saying no may well be one factor behind the high fatality rates for Hispanic workers.

"Employees learn through this course they won't get fired for reporting unsafe acts or conditions," says Maldonado. To encourage this kind of behavior, the airport set up a 'hotline,' so workers who call can do so confidentially.

Maldonado reports that many Latino workers on the project now feel comfortable about approaching others to remind them to wear safety glasses or hardhats, even those who are "higher up." But he points out that for this practice to be successful, cultural differences – even among Latinos – must be understood and respected.

"For example, some workers, such as those from Panama, may want to be greeted first instead of just told, 'You are doing something wrong,'" explains Maldonado, who is bilingual and Texas-born.

Don't skimp on training. Halcarz believes that in order to alter ingrained cultural and work practices, a 24-hour course is the absolute minimum, although a longer period is preferable. "The first day, people are still close-minded, but by the third day, we start to see attitudinal change, especially because we use non-traditional instructional methods." The 40-hour course used at DFWA is not cheap: about \$500 tuition per student, not counting the workers' wages paid for by the CDP.

Verify learning. Halcarz asserts what any experienced teacher knows: you should never assume just because a lesson has been delivered that the in-



Classroom instruction (top) includes helping workers understand basic construction terms, while hands-on training focuses on job skills.

formation has been received.

Well aware of the need to verify that a lesson has been learned, BEST figured out how to turn a problem into a solution. "We couldn't use written tests due to the literacy problem, so we took a hands-on, 'Montessori' approach for adults," he explains. "We're about learning, not teaching."

Students at the airport project learn by doing. The instructor demonstrates a skill such as the proper use of fall protection equipment. Then the students duplicate the lesson in a special classroom "laboratory" until they get it right.

"Evaluation is based on competency. They show you they can do it right in the lab," says Halcarz.

Follow-up. No training course, however effective, can provide permanent inoculation from occupational hazards. "We've learned some things as the program has grown," acknowledges D.W. Garrett, PCIP safety manager. "We now have a continuous quality improvement process that looks at how the training has affected employees on the line, to gauge our strengths and weaknesses." There is additional training to address those weaknesses.

Weekly safety meetings are used to reinforce lessons from the STP and to address new job hazards as they emerge. In addition, workers and subcontractors are coached and educated to follow safety rules. They are disciplined, or even terminated, if they do not.

"We also have a 'pre-task plan' means of communicating to our employees, sometimes in writing, before doing a job, so they understand the work better," says Austin Commercial's Smith. "This is always done in English and Spanish – something that is super-important to this project."

With respect to follow-up, though, Halcarz faulted the CDP's program for not being dynamic enough. "I think DFWA could do a better job of altering the course content as the project advances and changes," he comments. The job hazards change with the work, and workers would benefit from learning more about how to recognize the emerging perils they confront.



"We now have a **continuous quality improvement process** that looks at how the training has affected employees on the line."

— D.W. Garrett, PCIP safety manager

Wider Application?

The expansion of DFWA is a big, publicly funded construction project. Can private companies use DFWA's ambitious training program, and is it applicable to smaller jobs?

The STP was originally developed by BEST, and the two primary general contractors working at DFWA: Austin Commercial and Hensel Phelps. Spokesmen for both general contractors say they are considering adapting the course for use in other projects.

Because the airport has a high level of self-insurance through its PCIP, it can save money directly through lower injuries and workers' compensation costs. Other large projects that can afford to self-insure are looking for ways

to cut injuries and save money, according to Wingo, who adds some companies have told him controlling losses helps production and improves quality.

"But lots of companies that aren't large don't think they can do this," Wingo explains. "You do a big job and expect losses and don't look at controlling accidents as a potential source of profit." Even one serious incident can result in higher workers' compensation for 3 years, but the cost of the problem, as well as the benefit of avoiding it, is delayed. The cost of an ambitious training program, however, is immediate.

Still, Wingo hopes DFWA's expansion project is setting an example others will follow. "I'd like every construction project to operate the way they do," he says. **OH**